A Design of Star Shaped Fractal Antenna for Wireless Applications

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Abstract

This paper presents a design of star shaped fractal antenna for wireless applications. The FR4 glass epoxy substrate is used to design the antenna with relative permittivity 4.4 and thickness 1.6mm. Different parameters of antenna such as return loss, gain, VSWR and bandwidth have been analyzed at the resonant frequency of 5GHz. The -10dB impedance bandwidth of proposed antenna is from 3.5GHz to 6.4GHz and the gain of antenna increases from 5.45dB to 8.09dB by increasing the iteration number. The antenna is designed and simulated by using HFSS (High Frequency Structure Simulator) version 13 software. Proposed antenna can be used for various wireless communication applications such as WLAN, satellite communication, long distance radar telecommunication etc.

References

1. V. P. Meshram, P. Sangare, P. Wanjari and I. Chintawar, “design and fabrication of wide band fractal antenna for commercial applications,” IEEE International Conference on Machine


Index Terms

Computer Science wireless

Keywords

HFSS, WLAN, return loss, VSWR.